

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-004251**Date Inspected:** 24-Sep-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Liu Yang, Sun Yan Fei**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** 89M tower mockup, tower skin assemblies, etc.**Summary of Items Observed:****89M Tower Mockup**

Caltrans Quality Assurance Inspector George Goulet (QA Inspector) was informed that ZPMC was applying electric preheat to the fit lug to tower diaphragm weld on the 89M Tower Mockup and planned to proceed with welding when preheat reached the required temperature. QA Inspector observed thermal blankets installed at and near the weld area. QA Inspector was informed at 1030 hours by ABF QC Kim Xiao that ZPMC would not proceed with the welding because of the high chance of rain.

**Tower shop - Bay 1**

QA Inspector randomly observed approximately 45 ZPMC workers performing the following: SAW fill pass of SSD1-SA163A/D-27A through SSD1-SA163B/D-4A; FCAW-G of stiffener to SSD1-skin A lap assembly; SAW fill pass of SSD1-SA164A/F-5B; flame heat straightening of welded stiffener on SSD1-skin C assembly with 10 ton weight sitting on stiffeners. Also present in this bay were ZPMC CWI's Liu Yang and Zheneng Zhang as well as ABF QC's Yang Yi Heng, C.K. Chan, Jiang Zi Wen, and Zhang Qing Jian. Items observed appeared to comply with project specifications.

**Tower shop - Bay 2**

QA Inspector randomly observed approximately 65 ZPMC workers performing the following: SMAW of root pass of doubler plate 38M to SSD1-skin A assembly. QA Inspector also participated in discussions with ABF QC's Mike Williams, C.K. Chan, and Don Walton as well as Caltrans Quality Assurance Inspector Joselito Lizardo (QA Inspector 2) concerning undercut observed on doubler plate 28M the previous day. AWS D1.5, section 6.26.1.5 refers to welds transverse to tensile stress. QA Inspector asked Structural Material Representative Josh Ishibashi

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(SMR) to clarify if the welds observed were transverse to tensile stress. SMR responded that the welds were not transverse to tensile stress and to allow up to 1mm of undercut per AWS D1.5, section 6.26.1.5 as noted above. QA Inspector performed final VT on diaphragms 13M and 15M. Also present in this bay was ABF QC Zhang Da Ming. Items observed appeared to comply with project specifications.

### Heavy Duty Machine Shop - Bay 3

QA Inspector randomly observed 4 ZPMC workers in this bay. There were 14 full size panels and several unidentified deck plates in various stages of butt welding present in the bay. QA inspector observed welding equipment being set up. QA Inspector asked ZPMC QC Fu Yuhong (ZPMC QC) to inform QA Inspector what welding work would be performed this day in this bay. ZPMC QC informed QA Inspector that ZPMC personnel would be performing deck plate repairs per Welding Repair Report B-WR955. Also present in this bay was ZPMC QC Sun Yan Fei. Items observed appeared to comply with project specifications.

### Summary of Conversations:

As noted above in Summary.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Joshua Ishibashi, 136-6471-0411, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Goulet,George	Quality Assurance Inspector
<b>Reviewed By:</b>	Carreon,Albert	QA Reviewer

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